I. AMENDMENTS

TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) An audio system comprising at least one correction factor, the correction factor selected based on a method comprising:

generating acoustic signals from at least one loudspeaker placed at potential loudspeaker locations;

recording transfer functions for the generated acoustic signals at a plurality of listening positions;

determining a plurality of potential correction factors;

modifying the transfer functions based on the potential correction factors so that predicted transfer functions are generated for each of at least two of the plurality of listening positions for each of the plurality of potential correction factors, the predicted transfer functions representing simulations for the potential correction factors;

accessing a criterion by which to statistically analyze the predicted transfer functions;

statistically analyzing using the criterion across at least one frequency of the predicted transfer functions for the at least two of the plurality of listening positions; and

selecting a correction factor to improve for the criterion at the at least two of the plurality of listening positions based on the statistical analysis.

2. (Previously Presented) The audio system of claim 1, where the potential correction factor is a non-temporal correction factor.

3. (Previously Presented) The audio system of claim 2, where the nontemporal correction factor is selected from the group consisting of gain, amplitude, and equalization.

4. (Previously Presented) The audio system of claim 3, where the equalization is selected from the group consisting of parametric, graphic, paragraphic, shelving, FIR (finite impulse response), and transversal equalization.

5. (Canceled)

6. (Previously Presented) The audio system of claim 1, where the statistical analysis indicates efficiency of the predicted transfer functions for the plurality of listening positions.

7. (Previously Presented) The audio system of claim 6, where efficiency is examined for predetermined frequencies.

8. (Previously Presented) The audio system of claim 7, where selecting a correction factor based on the statistical analysis comprises selecting a value for the correction factor to increase efficiency of the audio system in the predetermined frequencies;

where the potential correction factor comprises potential volume correction; and

where selecting a value to increase efficiency comprises selecting a value that decreases volume of at least one of the loudspeakers in the audio system.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Previously Presented) A computer readable medium having software for causing a computer to execute a method, the computer readable medium comprising:

instructions for generating acoustic signals from at least one loudspeaker placed at potential loudspeaker locations;

instructions for recording transfer functions for the generated acoustic signals at a plurality of listening positions;

instructions for determining a plurality of potential correction factors;

instructions for modifying the transfer functions based on the potential correction factors so that predicted transfer functions are generated for each of at least two of the plurality of listening positions for each of the plurality of potential correction factors, the predicted transfer functions representing simulations for the potential correction factors;

instructions for accessing a criterion by which to statistically analyze the predicted transfer functions;

instructions for statistically analyzing using the criterion across at least one frequency of the predicted transfer functions for the at least two of the plurality of listening positions; and

instructions for selecting a correction factor to improve for the criterion at the at least two of the plurality of listening positions based on the statistical analysis.

13. (Previously Presented) The computer readable medium of claim 12, where the statistical analysis indicates efficiency of the predicted transfer functions for the plurality of listening positions.

14. (Previously Presented) The computer readable medium of claim 12, where the statistical analysis indicates consistency of the predicted transfer functions across the plurality of listening positions.

15. (Previously Presented) The computer readable medium of claim 12, where the statistical analysis indicates flatness for the predicted transfer functions.

16. (Previously Presented) The computer readable medium of claim 12, further comprising instructions for recommending a specific correction factor.

17. (Previously Presented) An audio system comprising at least one loudspeaker, at least one correction factor, and a plurality of listening positions, the at least one correction factor for the audio system selected based on a method comprising:

recording transfer functions at the plurality of listening positions;

determining a plurality of potential correction factors;

modifying the transfer functions based on the potential correction factors so that predicted transfer functions are generated for each of at least two of the plurality of listening positions for each of the plurality of potential correction factors, the predicted transfer functions representing simulations for the potential correction factors;

accessing a criterion by which to statistically analyze the predicted transfer functions;

statistically analyzing the predicted transfer functions using the criterion for the at least two of the plurality of listening positions; and

selecting at least one correction factor to improve for the criterion at the at least two of the plurality of listening positions based on the statistical analysis.

18. (Previously Presented) The audio system of claim 17, where the potential correction factor is a non-temporal correction factor.

19. (Previously Presented) The audio system of claim 18, where the nontemporal correction factor is selected from the group consisting of gain, amplitude, and equalization.

20. (Canceled)

21. (Previously Presented) The audio system of claim 17, where the statistical analysis indicates efficiency of the predicted transfer functions.

22. (Previously Presented) The audio system of claim 21, where efficiency is examined for predetermined frequencies.

23. (Previously Presented) The audio system of claim 22, where selecting a correction factor based on the statistical analysis comprises selecting a value for the correction factor to increase efficiency of the audio system in the predetermined frequencies;

where the potential correction factor corn .rises potential volume correction; and

where selecting a value to increase efficiency comprises selecting a value that decreases volume of at least one of the loudspeakers in the audio system.

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Previously Presented) A computer readable medium having software for causing a computer to execute a method, the computer readable medium comprising:

instructions for recording transfer functions at a plurality of listening positions;

instructions for determining a plurality of potential correction factors;

instructions for modifying the transfer functions based on the potential correction factors so that predicted transfer functions are generated for each of at least two of the plurality of listening positions for each of the plurality of potential correction factors, the predicted transfer functions representing simulations for the potential correction factors;

instructions for accessing a criterion by which to statistically analyze the predicted transfer functions;

instructions for statistically analyzing the predicted transfer functions using the criterion to determine at least one characteristic of the predicted transfer functions across the at least two of the plurality of listening positions.

28. (Previously Presented) The computer readable medium of claim 27, further comprising instructions for recommending a specific correction factor to improve for the criterion at the at least two of the plurality of listening positions.

29. (Canceled)

30. (Canceled)

31. (Canceled)

32. (Canceled)

33. (Previously Presented) The audio system of claim 1, where the audio system comprises a first loudspeaker and a second loudspeaker; and

where the correction factor selected is applied to at least one of the first loudspeaker and the second loudspeaker so that a signal for output on the first loudspeaker is different from a signal for output on the second loudspeaker.

34. (Previously Presented) The audio system of claim 33, where the first loudspeaker and second loudspeaker, prior to application of the correction factor, receive the same signal.

35. (Previously Presented) The audio system of claim 34, where the first loudspeaker and second loudspeaker comprise subwoofers.

36. (Previously Presented) The audio system of claim 34, where correction factors are selected for each of the first loudspeaker and the second loudspeaker; and

where the correction factor for the first speaker is different than the correction factor for the second speaker.

37. (Previously Presented) The audio system of claim 34, where the same signal comprises a signal output from a decoder.

38. (Previously Presented) The audio system of claim 37, where the same signal comprises a low frequency effects (LFE) signal.

39. (Previously Presented) The audio system of claim 34, further comprising selecting global correction to be applied to each of the first and second loudspeakers, the global correction providing global equalization of the first and second loudspeakers.

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Previously Presented) The audio system of claim 1, wherein the audio system comprises a first loudspeaker and a second loudspeaker;

wherein the plurality of correction factors comprises a first correction factor and a second correction factor;

wherein determining different combinations of potential correction factors comprises:

a first combination having the first correction factor applied to the first loudspeaker and the first correction factor applied to the second loudspeaker;

a second combination having the first correction factor applied to the first loudspeaker and the second correction factor applied to the second loudspeaker;

a third combination having the second correction factor applied to the first loudspeaker and the first correction factor applied to the second loudspeaker; and

a fourth combination having the second correction factor applied to the first loudspeaker and the second correction factor applied to the second loudspeaker,

wherein the plurality of listening positions comprises a first listening position and a second listening position; and

wherein modifying the transfer functions based on the different combinations of potential correction factors comprises:

generating a predicted transfer function at the first listening position for the first combination by superpositioning the transfer function from the first loudspeaker at the first listening position modified by the first correction factor with the transfer function from the second loudspeaker at the first listening position modified by the first correction factor;

generating a predicted transfer function at the second listening position for the first combination by superpositioning the transfer function from the first loudspeaker at the second listening position modified by the first correction factor with the transfer function from the second loudspeaker at the second listening position modified by the first correction factor;

generating a predicted transfer function at the first listening position for each of the second, third, and fourth combination; and

generating a predicted transfer function at the second listening position for each of the second, third, and fourth combination,

wherein statistically analyzing across at least one frequency of the predicted transfer functions comprises:

a first statistical analysis statistically analyzing at least one criterion for the predicted transfer function at the first listening position for the first combination and the predicted transfer function at the second listening position for the first combination;

a second statistical analysis statistically analyzing the at least one criterion for the predicted transfer function at the first listening position for the second combination and the predicted transfer function at the second listening position for the second combination;

a third statistical analysis statistically analyzing the at least one criterion for the predicted transfer function at the first listening position for the third combination and the predicted transfer function at the second listening position for the third combination; and

a fourth statistical analysis statistically analyzing the at least one criterion for the predicted transfer function at the first listening position for the fourth combination and the predicted transfer function at the second listening position for the fourth combination.

44. (Previously Presented) The audio system of claim 43, wherein the at least one criterion comprises flatness; and

wherein the first statistical analysis comprises analyzing flatness of the predicted transfer function at the first listening position for the first combination and the predicted transfer function at the second listening position for the first combination.

45. (Previously Presented) The audio system of claim 43, further comprising ranking the first, second, third, and fourth combinations based on the first, second, third, and fourth statistical analysis; and

wherein selecting a correction factor based on the statistical analysis comprises manually selecting one of the first, second, third, or fourth combinations based on the ranking.

46. (Previously Presented) The audio system of claim 1, where the criterion is selected from the group consisting of flatness, consistency, efficiency, and smoothness.

47. (Previously Presented) The audio system of claim 1, where the statistical analysis comprises variance across the at least two of the plurality of listening positions.

48. (Previously Presented) The audio system of claim 47, where the variance comprises spatial variance across the at least two of the plurality of listening positions.

49. (Previously Presented) The computer readable medium of claim 12, where the criterion is selected from the group consisting of flatness, consistency, efficiency, and smoothness.

50. (Previously Presented) The computer readable medium of claim 12, where the statistical analysis comprises variance across the at least two of the plurality of listening positions.

51. (Previously Presented) The computer readable medium of claim 50, where the variance comprises spatial variance across the at least two of the plurality of listening positions.

52. (Previously Presented) The audio system of claim 17, where the criterion is selected from the group consisting of flatness, consistency, efficiency, and smoothness.

53. (Previously Presented) The audio system of claim 17, where the statistical analysis comprises variance across the at least two of the plurality of listening positions.

54. (Previously Presented) The audio system of claim 53, where the variance comprises spatial variance across the at least two of the plurality of listening positions.

55. (Previously Presented) The computer readable medium of claim 27, where the criterion is selected from the group consisting of flatness, consistency, efficiency, and smoothness.

56. (Previously Presented) The computer readable medium of claim 27, where the statistical analysis comprises variance across the at least two of the plurality of listening positions.

57. (Previously Presented) The computer readable medium of claim 56, where the variance comprises spatial variance across the at least two of the plurality of listening positions.